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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/753,388	01/09/2004	Kang-Ping Lin	MR2561-137	6089

4586 7590 10/19/2005

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3458 ELLICOTT CENTER DRIVE-SUITE 101
ELLICOTT CITY, MD 21043

EXAMINER	
FAULCON JR, LENWOOD	
ART UNIT	**PAPER NUMBER**
3762	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/753,388	LIN ET AL.	
	Examiner	Art Unit	
	Lenwood Faulcon, Jr.	3762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/9/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5-8, 10-15, 17-22, 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (U.S. Patent No. 5,317,269) in view of Sekine (U.S. Patent No. 4,844,090).

Mills et al. teaches of a wrist-worn ECG monitor with battery end of life prediction, comprising a housing, a monitor and a wristband (col. 1 lines 61-68, col. 2 lines 1-2, Figure 1.). Mills et al. also teaches that the housing comprises dual skin electrodes located on a wrist-contacting, inner or rear base plate and on an outer or front surface contactable by the palm of a patient's other hand (col. 2 lines 14-17). Mills et al. further teaches of the use of one or more input signal jacks and one or more pairs of external electrodes, to produce ECG data (col. 7 lines 39-47). Mills et al. also teaches that the electrodes are dry electrodes and may be formed by plating a region of a stainless steel or other base metal with a thin later of titanium nitride, titanium carbide or titanium carbo-nitride (col. 2 lines 17-21).

Further, Mills et al. teaches of the use of a microprocessor and associated electronics that comprise the ability to detect and ignore noise and motion artifacts. Mills et al. also teaches of an ECG signal amplifier including hardware filters coupled

with electrodes, for producing an analog signal representative of the electrical field on the surface of the patient's skin and between the electrodes (col. 3 lines 20-24). Mills et al. also teaches of pushbutton controls (col. 6 lines 59-65).

Sekine teaches of pencil type heart potential waveform measuring device, comprising electrodes (2, 3) that extend around the edge of the shell of the device. Sekine also teaches of the use of a pre-amplifier (11) and an output amplifier (16).

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Mills et al. with the teachings of Sekine. Mills et al. and Sekine both teach of cardiac monitors that measure ECG data detected from a patient's hand, and thus teach of analogous arts. It would have also been obvious to one having ordinary skill in the art at the time of the invention to modify the device as taught by Mills et al. to include a pre-amplifier as taught by Sekine, since this is commonly known in the art to provide a gain to the detected signal (col. 6 lines 16-25). It would have further been obvious at the time of the invention to modify the device as taught by Mills et al. to include at least one electrode that would extend around the shell of the device as taught by Sekine, since this would increase the patient's ability to grip the device and maintain an efficient and effective measurement of ECG data.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the device as taught by Mills et al. to include a pair of electrodes for wrist-contacting on the rear base plate and a pair of electrodes on front surface for hand-contact, as taught by Mills et al. (col. 7 lines 39-47). It would have also been obvious to one having ordinary skill in the art at the time of the invention to modify the

device as taught by Mills et al. to include values of the ST segment, QRS interval, heartbeat rate and heart conditions, since these are commonly known values and analyzes that are commonly detected and displayed in the art. Further, it would have been obvious to one having ordinary skill in the art at the time of the invention that device as taught by Mills et al. can be applied to various types of portable electronic devices, since cardiac monitors are commonly known to be implemented in such devices.

Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Mills et al. with the teachings of Sekine to meet the limitations of claims 1-3, 5-8, 10-15, 17-22, 24-27.

3. Claims 4, 9, 16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills et al. (U.S. Patent No. 5,317,269) in view of Sekine (U.S. Patent No. 4,844,090) as applied to claims 1-3, 5-8, 10-15, 17-22, 24-27 above, and further in view of Dunseath (U.S. Patent No. 4,865,039).

Dunseath teaches of a dry electrode system for use in detecting biopotentials existing on the surface of the skin of a living body, in which the electrodes comprise conductive silicone rubber (col. 8 lines 25-28).

It would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Mills et al. and Sekine for the reasons stated above, and to further combine the teachings of Mills et al. with the teachings of Dunseath. Mills et al. and Dunseath both teach of dry electrode system that detect biopotentials existing on the surface of the skin of a living body, and thus teach of

analogous arts. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the system as taught by Mills et al. to use electrodes made of silicone rubber as taught by Dunseath, since it is well known in the art to provide efficient and effective detection of biopotentials. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to combine the teachings of Mills et al., Sekine and Dunseath to have the limitations of claims 4, 9, 16 and 22.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lester et al. (U.S. Patent No. 4,129,125), Righter (U.S. Patent No. 5,191,891), Mills et al. (U.S. Patent No. 5,289,824), Mills et al. (U.S. Patent No. 5,613,495), Amano et al. (U.S. Patent No. 6,241,684), Scalisi et al. (U.S. Patent No. 6,363,274), Chen (U.S. 2005/0148889).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lenwood Faulcon, Jr. whose telephone number is 571-272-6090. The examiner can normally be reached on Monday-Thursday from 9 to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Angela D. Sykes, can be reached on 571-272-4955. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lenwood Faulcon, Jr.

George Manuel

Primary Examiner